

DEPARTMENT OF TRANSPORTATION**DIVISION OF ENGINEERING SERVICES**

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch
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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:**Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-001977**Date Inspected:** 18-Apr-2008**Project Name:** SAS Superstructure**OSM Arrival Time:** 630**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1530**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** Sun Wei**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** Tower Skin Plates**Summary of Items Observed:**

On this date CALTRANS OSM Quality Assurance (QA) Inspector was present during the times noted above for observations relative to the work being performed.

Bay 2- New Tower Building

The QA Inspector randomly observed ZPMC qualified welder Ms. Lao Xiaohua, ID #056975, performing groove welding of weld joint ESD1-SA216A/K-16A(16B) filler passes. Ms. Lao was observed welding in the 1G (flat) position utilizing a Submerged Arc Welding (SAW) process with a 4.8mm diameter electrode, filler metal brand LA-85, class MIL800-HPNI, machine. The QA Inspector observed the ZPMC Quality Control (QC) Inspector Zhu Zhanghai verifying that the welding parameters and pre-heat were in accordance with the Welding Procedure Specification (WPS). The QA Inspector observed preheat and welding parameters measured by the QC Inspector Zhu Zhanghai and found them to be a preheat temperature of 110°C and welding parameters amps of 687, volts of 32.8, and a travel speed of 660. Welding parameters observed by the QA Inspector appeared to be in general compliance with the approved WPS-B-T-3221-B-U3c-S.

The QA Inspector randomly observed ZPMC qualified welder Ms. Xia Yang Liu, ID #048882, performing groove welding of weld joint ZSD1-SA237A/F1B filler passes. Ms. Xia was observed welding in the 1G (flat) position utilizing a submerged arc welding SAW process with a 4.8mm diameter electrode, filler metal brand LA-85, class MIL800-HPNI, machine. The QA Inspector observed the ZPMC QC Inspector Zhu Zhanghai verifying that the welding parameters and pre-heat were in accordance with the WPS. The QA Inspector observed preheat and welding parameters measured by the QC Inspector Zhu Zhanghai and found them to be a preheat temperature of 110°C and welding parameters amps of 688, volts of 32.1, and a travel speed of 660. Welding

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parameters observed by the QA Inspector appeared to be in general compliance with the approved WPS-B-T-3221-B-U3c-S.

The QA Inspector randomly observed ZPMC qualified welder Ms. Shen Mei, ID #041716, performing groove welding of weld joint ZSD1-237A/F-2B filler passes. Ms. Shen was observed welding in the 1G (flat) position utilizing a submerged arc welding SAW process with a 4.8mm diameter electrode, filler metal brand LA-85, class MIL800-HPNI, machine. The QA Inspector observed the ZPMC QC Inspector Wang Lu verifying that the welding parameters and pre-heat were in accordance with the WPS. The QA Inspector observed preheat and welding parameters measured by the QC Inspector Wang Lu and found them to be a preheat temperature of 110°C and welding parameters amps of 676, volts of 32.4, and a travel speed of 677. Welding parameters observed by the QA Inspector appeared to be in general compliance with the approved WPS-B-T-3221-B-U3c-S.

Ultrasonic Observation

The QA Inspector observed ZPMC Ultrasonic Testing (UT) Technicians performing full volumetric ultrasonic testing of Complete Joint Penetration (CJP) weld repair on the tower skin plate splice connection designated SSD1-SA159D/J-4A(4B). The QA Inspector observed ZPMC personnel using a 45 shear wave transducer/plastic wedge combination to examine the top quarter of the weld and a 70 shear wave transducer/plastic wedge combination to examine both the middle half and bottom quarter of the weld respectively. Once the UT was completed, ZPMC personnel documented a rejectable indication at a previously repaired area.

Summary of Conversations:

The QA Inspector spoke with the ZPMC CWI QC personnel Sun Wei regarding the general location and work scheduled for the day.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Mazen Wahbeh, (818) 292-0659, who represents the Office of Structural Materials for your project.

Inspected By:	Clifford,William	Quality Assurance Inspector
Reviewed By:	Cuellar,Robert	QA Reviewer
